Remarks/Arguments

A. Claims In the Case

Claims 293-296, 298-310, 443-461, and 463-476 are rejected. Claims 293-296, 298-310, 443-461. and 463-476 are pending. Claims 293, 298, 299, 449, 450, 454-461, 463, 464, 475, and 476 have been amended.

B. Request for Signed Electronic Information Disclosure Statements

Applicant notes that the Examiner has not acknowledged receipt of all Information Disclosure Statements filed for the above-captioned application. Applicant has attached the unacknowledged electronic Information Disclosure Statement listing U.S. Patent Documents citation numbers 1-6 received by the PTO on September 22, 2003 as indicated on the enclosed copy of information disclosure statement obtained from the Patent Application Retrieval database (Exhibit A), and U.S. Patent Documents citation numbers 1-14 received by the PTO on September 22, 2003 as indicated on the enclosed copy of the acknowledgment receipt EFS ID: 67216 (Exhibit B).

C. The Claims Are Not Obvious Over Su et al. In View of Kachel et al. Pursuant To 35 U.S.C. § 103(a)

The Examiner has rejected claims 293-296, 298-310, 443-461 and 463-450 as being unpatentable over U.S. Patent No. 6,068,464 to Su et al. (hereinafter "Su") in view of European Patent Application No. 0 318 164 to Kachel et al. (hereinafter "Kachel"). Applicant respectfully disagrees with these rejections.

In order to reject a claim as obvious, the Examiner has the burden of establishing a *prima facie* case of obviousness. *In re Warner et al.,* 379 F.2d 1011, 154 USPQ 173, 177-178 (C.C.P.A.

1967). To establish a *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP § 2143.03.

Claims 293 and 450 are directed towards a programmable logic controller for controlling a lens forming apparatus that includes a combination of features including, but not limited to, the features of, "a curing unit configured to direct activating light and heat toward the mold members during use to cure a lens forming composition disposed in the mold cavity" and "the controller is configured to control operation of the curing unit during use, and adjust lens curing conditions in the curing unit based on the eyeglass prescription during use."

Support for the amendments are found in Applicant's specification, which states:

> In another embodiment, the lens forming composition may be irradiated with continuous activated light in a heated curing chamber to initiate curing of the lens forming composition. Subsequent to initiating the curing, the lens forming composition may be treated with additional activating light and heat to further cure the lens forming composition.
> (Page 13, lines 25-29).

> The controller is preferably configured to control the operation of lamps 440 (See Fig. 12). The lamps are preferably turned on and off at the appropriate times during the post-cure procedure. For example, in some post-cure operations the lights may not be required, thus the controller would keep the lights off during this process. During other processes, the lights may be used to complete the curing of the lens. The controller is preferably configured to turn the lights on and to control the amount of time the lights remain on during a post-cure procedure. The controller may also be configured to create light pulses during the post-cure procedure. Both the length and frequency of the light pulses may be controlled by the controller.
>
> The controller is preferably configured to control operation of the heating device 418 during the post-cure operation. Heating device 418 is preferably turned on and off to maintain a predetermined temperature within the post-cure unit. Alternatively, when a resistive heater is used, the current flow through the heating element may be altered to control the temperature within the post-cure unit.

> Preferably both the application of light and heat are controlled by the controller. The operation of fans, coupled to the post-cure unit, is also preferably controlled by the controller. The fans may be operated by the controller to circulate air within or into/out of the post-cure unit.
> (Page 56, lines 6-22).

> After the initial cure process is completed, the mold assembly is transferred to the post cure unit. The completion of the initial cure process may cause the controller to alert the operator that the process is completed. An alarm may go off to indicate that the process is completed. To initiate the post cure process, the post cure button 640c may be pressed. Pressing the post cure button may cause the controller to prompt the user to enter a reference code corresponding to the saved prescription information. The controller is preferably configured to analyze the prescription information and set up the appropriate post cure conditions. For a clear, non-tinted lens having sphere power of +3.00 the post cure conditions will include directing activating light toward the mold assembly in a heated post cure unit for 13 minutes. The post cure unit is preferably heated to a temperature of about 200 °F to about 225 °F during the post cure process.
> (Page 236, lines 1-11).

Applicant submits that Su, individually, or in combination with Kachel, does not appear to teach or suggest the combination of features of the claim including, but not limited to the features of: "a curing unit configured to direct activating light and heat toward the mold members during use to cure a lens forming composition disposed in the mold cavity" and "adjust lens curing conditions in the curing unit based on the eyeglass prescription during use." Su appears to teach a computer that determines the correct molds to use and a computer subsystem that turns the UV light sources on for a predetermined time. For example, Su states:

> The computer subsystem also includes a memory subsystem and a hard disk to run computer programs...
>
> Algorithms used in a computer program determines the appropriate front and rear molds 40, 50 to be used to form the desired lens and the computer subsystem then provides an output indicating the correct molds to use.
> (Su, column 12, line 59 through column 13, line 1)

> The desired exposure time to the UV light is between twenty (20) seconds and thirty (30) minutes, more preferably between thirty (30) seconds and two (2) minutes, and most preferably between forty-five (45) seconds and one and a half (1/2) minutes. The exposing step occurs by placing the monomer between a plurality of UV light sources, preferably one adjacent to each end of the gasket 20 so that the UV light passes through the glass molds to the monomer into the cavity 31. The intensity of the UV light sources 312 is preferably about 1.2-1.3 x 10^{-2} watts per square centimeter at a wavelength of 350 nanometers.
>
> The process of exposing the lens-forming assembly 10 can be automated by, for example, using the curing station 300 in FIG. 15. The operator connects the handle member 154 of the clamp 152 to a movable cylinder rod 310, which moves the clamp 152 and lens forming assembly 10 upwardly. At the top position the two molds 40,50 are each exposed to a UV light source 312 so that the UV light passes therethrough to interact with the monomer. The computer subsystem or other automated or manual means energizes the UV light sources 312 for a desired period, after which time the movable cylinder rod 310 lowers so that the operator can remove the clamp 152 and lens-forming assembly 10.
> (Su, column 22, line 65 through column 23, line 35).

Applicant submits that the features of the claims including, but not limited to, the features of, "a curing unit configured to direct activating light and heat toward the mold members during use to cure a lens forming composition disposed in the mold cavity" and "the controller is configured to control the operation of the curing unit during use and adjust lens curing conditions in the curing unit based on the eyeglass prescription during use" are not taught or suggested by Su.

Kachel appears to teach the use of a heating cycle rather than a light curing cycle. The heating cycle of Kachel appears to be based on the resin type, rather than the eyeglass prescription. For example, Kachel states:

> After all the gasket assemblies have been filled with resin, the operator places them in the oven or ovens 26 as the case may be. The ovens 26 subject the resin to a heat cycle which will cause solidification. The typical time cycle will be overnight, however, shorter time cycles may be utilized depending on the resin formulation
> (Kachel, page 16, lines 52-55).

> The operator can then removed (sic) the filled forms from accumulator 338, and place them within either of two ovens, which are controlled for suitable curing cycles. A typical curing cycle would be for an initial 15 hours commencing at 105 °F and ramped to increase to 145 °C.
> (Kachel page 17, lines 55-57)

Applicant submits that the features of the claims including, but not limited to, the features of, "a curing unit configured to direct activating light and heat toward the mold members during use to cure a lens forming composition disposed in the mold cavity" and "the controller is configured to control the operation of the curing unit during use and adjust lens curing conditions in the curing unit based on the eyeglass prescription during use" are not taught or suggested by Su, individually, or in combination with Kachel.

As such, Applicant submits, for at least the reasons cited above, independent claims 293. 450, and the claims dependent thereon (claims 294-296, 298-310, 443-449, 451-461 and 463-476) are patentable over Su in view of Kachel.

D. <u>The Claims Are Not Obvious Over Su in View of Kachel In Further View of Blum et al. Pursuant To 35 U.S.C. § 103(a)</u>

Claims 299 and 464 were rejected as being unpatentable over Su in view of Kachel in further view of U.S. Patent No. 4,929,850 to Blum et al. (hereinafter "Blum"). Applicant respectfully disagrees with these rejections.

For at least the reasons stated above, Applicant submits independent claims 293 and 250 are patentable over Su in view of Kachel.

Claim 299 states in part, "wherein the curing unit comprises a first light source and a second light source, and wherein the controller is configured to individually control the first and second light sources during use." Applicant submits that the features of claim 299 in combination with the features of claim 293 are not taught or suggested by the cited art.

Claim 464 states in part, "wherein the apparatus further comprises a light sensor configured to measure the dose of light transmitted to the mold cavity during use, and wherein the light sensor is configured to communicate with the controller, and wherein the controller varies the intensity or duration of light such that a predetermined dose is transmitted to the mold cavity during use." Applicant submits that the features of claim 464 in combination with the features of independent claim 450 are not taught or suggested by the cited art.

E. The Claims Are Not Obvious Over Su in View of Kachel In Further View of Buazza et al. Pursuant To 35 U.S.C. § 103(a)

Claims 298 and 463 were rejected as being unpatentable over Su in view of Kachel in further view of U.S. Patent No. 6,086,799 to Buazza et al. Applicant respectfully disagrees with these rejections.

Claims 298 and 463 state in part, "wherein the apparatus further comprises a light sensor configured to measure the dose of light transmitted to the mold cavity, and wherein the light sensor is configured to communicate with the controller, and wherein the controller varies the intensity or duration of light such that a predetermined dose is transmitted to the mold cavity." Applicant submits, for at least the reasons cited above, claims 293 and 450, thus dependent claims 298 and 463 respectively, are patentable over the cited art.

F. The Claims Are Not Obvious Over Su In View of Kachel et al. In Further View of Buazza et al. Pursuant To 35 U.S.C. § 103(a)

Claims 300-301, 455-457 and 465-466 were rejected as being unpatentable over Su in view of Kachel in further view of U.S. Patent No. 5,989,462 to Buazza et al. Applicant respectfully disagrees with these rejections.

For at least the reasons stated above, Applicant submits that independent claims 293 and 450 are patentable over Su in view of Kachel.

Claim 300 states in part, "wherein the controller is configured to perform system diagnostic checks during use." Applicant submits that the features of claim 300 in combination with the features of independent claim 293 are patentable over the cited art.

Claim 301 states in part, "wherein the controller is configured to notify the user when the system requires maintenance during use." Applicant submits that the features of claim 301 in combination with the features of independent claim 293 are patentable over the cited art.

Claim 455 states in part, "wherein the curing unit comprises a first activating light source, wherein the first activating light source is configured to produce activating light directed toward a mold assembly during use; a second activating light source, wherein the first activating light source is configured to produce activating light directed toward a mold assembly during use; a first filter disposed between the first light source and the first mold member; wherein first filter is configured to manipulate the intensity of the activating light emanating from the first activating light source during use; and a second filter disposed between the second light source and the second mold member, wherein second filter is configured to manipulate the intensity of the activating light emanating from the second activating light source during use." Applicant submits that the features of claim 455 in combination with the features of independent claim 450 are patentable over the cited art.

Claim 456 states in part, "wherein the curing unit comprises, a first activating light source, wherein the first activating light source is configured to produce activating light directed toward a mold assembly during use a second activating light source, wherein the second activating light source is configured to produce activating light directed toward a mold assembly during use; a first filter disposed between the first light source and the first mold member; wherein first filter is configured to manipulate the intensity of the activating light emanating

from the first activating light source during use; a second filter disposed between the second light source and the second mold member, wherein second filter is configured to manipulate the intensity of the activating light emanating from the second activating light source during use; and wherein the first and second filters are configured to thermally isolate the first and second activating light sources from the lens curing chamber during use." Applicant submits that the features of claim 456 in combination with the features of independent claim 450 are patentable over the cited art.

Claim 457 states in part, "wherein the curing unit comprises: a first activating light source, wherein the first activating light source is configured to produce activating light directed toward a mold assembly during use; a second activating light source, wherein the second activating light source is configured to produce activating light directed toward a mold assembly during use; a first thermal barrier disposed between the first activating light source and the first mold member, and a second thermal barrier disposed between the second activating light source and the second mold member." Applicant submits that the features of claim 456 in combination with the features of independent claim 450 are patentable over the cited art.

Claim 465 states in part, "wherein the controller is configured to perform system diagnostic checks during use." Applicant submits that the features of claim 465 in combination with the features of independent claim 450 are patentable over the cited art.

Claim 466 states in part, "wherein the controller is configured to notify a user when the system requires maintenance during use." Applicant submits that the features of claim 466 in combination with the features of independent claim 450 are patentable over the cited art.

G. The Claims Are Not Obvious Over Su In View of Kachel et al. In Further View of Kokonaski et al. Pursuant To 35 U.S.C. § 103(a)

Claims 303-310 and 468-472 were rejected as being unpatentable over Kachel in view of

Kachel in further view of PCT Application No. WO 98/28126 to Kokonaski et al. (hereinafter "Kokonaski"). Applicant respectfully disagrees with these rejections.

For at least the reasons stated above, Applicant submits that independent claims 293 and 450 are patentable over Su in view of Kachel. As such, Applicant submits that the claims dependent on claim 293 and 450 (claims 303-310 and 468-472, respectively, and new claims 475-476) are not taught or suggested by the cited art.

H. Additional Remarks

Based on the above, Applicant respectfully requests favorable reconsideration.

If any extension of time is required, Applicant hereby requests the appropriate extension of time. If any fees are inadvertently omitted or have been overpaid, please appropriately charge or credit those fees to Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. Deposit Account Number 50-1505/5040-04205/EBM

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